

AMENDMENTS TO THE CLAIMS

1. (currently amended) A process comprising:
introducing at least one monomer, at least one catalyst, and at least one diluent into an olefin polymerization zone under polymerization conditions, wherein the at least one monomer is polymerized to form at least one polyolefin, and wherein the olefin polymerization zone comprises a slurry polymerization reactor that is a loop reactor or a stirred tank reactor;
introducing at least one catalyst deactivating agent into the olefin polymerization zone for a selected time in an amount effective to substantially deactivate at least part of the at least one catalyst, whereby the polymerization of the at least one monomer is substantially stopped or the rate of polymerization is substantially slowed; and
restarting polymerization by introducing into the olefin polymerization zone the at least one catalyst.
2. (original) The process of claim 1, wherein the quantity of catalyst in the olefin polymerization zone is determined, and based on that determination, an amount of catalyst deactivating agent is introduced that is sufficient to substantially deactivate the catalyst but is not more than 125% of the amount required to substantially deactivate the catalyst.
3. (original) The process of claim 2, wherein the amount of catalyst deactivating agent introduced is not more than 110% of the amount required to substantially deactivate the catalyst.
4. (original) The process of claim 3, wherein the amount of catalyst deactivating agent introduced is not more than 105% of the amount required to substantially deactivate the catalyst.

5. (original) The process of claim 1, wherein polymerization is restarted within about 2 to about 6 hours after the catalyst deactivating agent is introduced into the olefin polymerization zone.
6. (original) The process of claim 5, wherein polymerization is restarted within about 2 to about 4 hours after the catalyst deactivating agent is introduced into the olefin polymerization zone.
7. (currently amended) ~~The process of claim 1, further comprising:~~ A process comprising: introducing at least one monomer, at least one catalyst, and at least one diluent into an olefin polymerization zone under polymerization conditions, wherein the at least one monomer is polymerized to form at least one polyolefin, and wherein the olefin polymerization zone comprises a slurry polymerization reactor that is a loop reactor or a stirred tank reactor;
withdrawing an effluent from the ~~polyolefin~~ olefin polymerization zone, and introducing the effluent into a separation zone in which the effluent is separated into a polyolefin lean stream and a polyolefin rich stream; and
passing the polyolefin rich stream to an agglomerating zone, in which polyolefin is agglomerated;
introducing at least one catalyst deactivating agent into the olefin polymerization zone for a selected time in an amount effective to substantially deactivate at least part of the at least one catalyst, whereby the polymerization of the at least one monomer is substantially stopped or the rate of polymerization is substantially slowed; and restarting polymerization by introducing into the olefin polymerization zone at least one catalyst.
8. (original) The process of claim 7, wherein the polyolefin rich stream is passed directly to the agglomerating zone, without first passing through a storage zone.
9. (original) The process of claim 7, wherein the agglomerating zone comprises an extruder, and polyolefin is extruded in the agglomerating zone.

10. (original) The process of claim 1, wherein the at least one catalyst deactivating agent comprises water, alcohol, another oxygen-containing material, or a mixture thereof.
11. (original) The process of claim 10, wherein the at least one catalyst deactivating agent comprises water, methanol, ethanol, propanol, ethyl acetate, acetic acid, or a mixture thereof.
12. (original) The process of claim 1, wherein the at least one polyolefin is a homopolymer consisting essentially of polymerized monomers having from 2 to about 10 carbon atoms per molecule or a copolymer comprising at least two different polymerized monomers having from 2 to about 16 carbon atoms per molecule.
13. (original) The process of claim 12, wherein the at least one polyolefin is a homopolymer consisting essentially of polymerized ethylene.
14. (currently amended) The process of claim 1, wherein the at least one catalyst is a Ziegler-Natta catalyst, Phillips catalyst, metallocene catalyst, or a mixture thereof; wherein the catalysts comprise ~~transition~~ transition metals of Groups IVB-VIII of the Periodic Table of Elements.
15. (currently amended) ~~The process of claim 1, wherein the at least one diluent is isobutane~~
A process comprising:
introducing at least one monomer, at least one catalyst, and isobutane into an olefin
polymerization zone under polymerization conditions, wherein the at least one
monomer is polymerized to form at least one polyolefin, and wherein the olefin
polymerization zone comprises a slurry polymerization reactor that is a loop
reactor or a stirred tank reactor;
introducing at least one catalyst deactivating agent into the olefin polymerization zone for
a selected time in an amount effective to substantially deactivate at least part of

the at least one catalyst, whereby the polymerization of the at least one monomer is substantially stopped or the rate of polymerization is substantially slowed; and restarting polymerization by introducing into the olefin polymerization zone at least one catalyst.

16-19. (canceled)